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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,284	06/27/2001	Kyoung Sub Kim	8733.438.00	1850

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EXAMINER

WARREN, MATTHEW E

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,284

Applicant(s)

KIM ET AL.

Examiner

Matthew E Warren

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the RCE and Amendment filed on November 17, 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Prior Art Figure 3 (APAF) in view of Suzuki et al. (US 5,637,007).

In re independent claims 1, 3, 5, 8, and 10 the APAF (fig. 3) shows a lamp apparatus for a liquid crystal display comprising a lamp (2) for generating light, a wire (3) for supplying external electric power to the lamp, a soldering (4) for connecting the lamp to the wire, a holder (5) for enclosing the soldering, and a lamp housing (1) for enclosing the holder and the lamp. The APAF shows all of the elements of the claims except the resin in the holder between the soldering and the holder. Suzuki et al. shows (fig. 1) a connector structure in which a housing (2) including wires (3) are connected to a terminal (4) by solder (col. 3, lines 62-67). A resin (10) fills a cavity (5) to provide a seal and fix the wires to their terminals (col. 4, lines 18-28). If the resin of Suzuki et al. is applied to the holder of the APAF, then the solder of the combined invention would inherently resist external forces as the applicant's claimed invention does because the

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same materials and structure are used. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lamp housing of the APAF 3 by inserting resin into the holder portion and enclose the wire at the end of the housing as taught by Suzuki to seal the cavity and fix wires to their terminals.

In re claims 4 and 9, the APAF 1 shows the lamp apparatus is installed at each side of the liquid crystal display case.

In re claims 6, 11, and 12, the APAF 3 shows a soldering (4) electrically connecting the lamp to the wire and a holder (5) passing through the lamp housing to enclose the lamp, wire and the soldering.

Claims 2, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 3 (APAF) in view of Suzuki et al. (US 5,637,007) as applied to claims 1, 5, and 10 above, and further in view of Saito (JP 4-46314).

In re claims, 2, 7, and 13, the APAF in view of Suzuki et al. shows all of the elements of the claims except the specific material of the resin. Saito discloses (abstract and fig. 4) an LCD element having a resin material of epoxy (12) at an end of device to form a reliable seal without bubbles or moisture. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the resin of the APAF and Suzuki by using specific resins such as epoxy at taught by Saito to form a reliable seal.

Response to Arguments

Applicant's arguments filed with respect to claims 1-13 have been fully considered but they are not persuasive. The applicant primarily asserts that Suzuki cannot be applied to cure the deficiencies the Applicant's Prior Art Figure 3 (APAF) because Suzuki is not analogous art and does not provide proper motivation. The examiner believes that Suzuki is an analogous reference and can therefore be combined with the APAF. Although Suzuki pertains to a connector device for a hydraulic circuit mounted within a housing and not a lamp apparatus for an LCD, Suzuki is analogous because it deals with securing electrical connectors in a housing. The applicant's invention pertains to securing and protecting the electrical connection of the lamp apparatus in the housing of an LCD. Although the overall devices of the hydraulic circuit and LCD lamp apparatus differ, the housings and more importantly the electrical connectors within those housings contain the same structures; wires and solder. If one were looking to somehow improve and protect the electrical connection in a housing, one would look to Suzuki and find that resin seals the connection and protects it from outside substances. The applicant amends the claims by stating that the resin reinforces the soldering such that soldering resists external forces. Such a limitation is not distinguishable over the cited art because that limitation merely recites a property or function of the resin within the solder housing. Certainly, any device having a resin within a housing and surrounding a solder connection would inherently perform the same function. Certainly, Suzuki's solder performs the same function within the housing for the hydraulic circuit because the materials and structure are the same. However,

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Suzuki additionally states in column 4, lines 21-27 that the sealer..."also serves to fix the wires 3 and the terminals 4, and further seals the front end portions of the wires 3..." This statement essentially states that resin reinforces the solder because it fixes the wires 3 and terminals 4 (aka solder in col. 3, lines 62-67). Suzuki further lists additional benefits of the resin by stating that it prevents diffusion of oil into the wire and solder connection.

The applicant further attacks the motivation for combining Suzuki by stating that the resin of Suzuki prevents the diffusion of oil into a wire instead of protecting the connection from an external force. Again, Suzuki additionally states in column 4, lines 21-27 that the sealer..."also serves to fix the wires 3 and the terminals 4, and further seals the front end portions of the wires 3..." Although this portion of the motivation for using the resin/sealer of Suzuki differs from the applicant's teaching, Suzuki still teaches that the resin also fixes the connections, thus reinforcing. The applicant cannot continuously attack Suzuki's motivation because of the additional benefits of preventing diffusion of oil into the wire connection. Furthermore, the applicant has merely discovered an additional benefit of using resin in an electrical connection (which Suzuki also discloses) and such discovery does not preclude Suzuki's teachings from being proper motivation. For these reasons, the examiner believes that the APAF and Suzuki show all of the elements of the claims and the rejection is proper.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW

MEW

November 23, 2004



**RADLEY BAUMEISTER
PRIMARY EXAMINER**